

## REMARKS

Claims 1 to 19 are pending. Claims 1 to 15, 17 and 18 have been amended. Former Claims 1 to 19 are rejected under 35 U.S.C. § 112. For the reasons outlined below, these rejections are respectfully traversed and reconsideration and withdrawal are respectfully requested.

### Rejections Under 35 USC § 112

The Examiner has rejected Claims 1 to 19 as being indefinite with reference to the term "analog". In response, Claim 1 has been amended to remove this term and dependent Claims 2 to 15, 17 and 18 have been amended to replace this term with "purine nucleotide", accordingly.

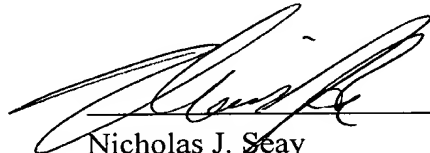
Claims 17 and 18 have been further amended to recite certain terms in the singular and to remove the term "and/or".

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attachment is captioned "Version with Markings to Show Changes Made."

It is believed this responds to all of the Examiner's concerns, however if the Examiner has any further questions, he is invited to contact Joy Morrow at 613-232-2486.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

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Examiner: S. Houtteman

Title: C8-SUBSTITUTED PURINE NUCLEOTIDE  
ANALOGS AND THEIR USE AS INHIBITORS  
OF NUCLEOSIDE TRIPHOSPHATE  
DIPHOSPHOHYDROLASES

File No.: 850865.90015

1. (Amended) A C8-substituted purine nucleotide [analog], wherein the purine nucleotide [analog] is substituted at the C8 position with a substituent other than H.

2. (Amended) The purine nucleotide [analog] of claim 1, wherein the purine is adenine.

3. (Amended) The purine nucleotide [analog] of claim 1, wherein the substituent is an ether, thioether or an amine.

4. (Amended) The purine nucleotide [analog] of claim 2, wherein the substituent is an ether, thioether or an amine.

5. (Amended) The purine nucleotide [analog] of claim 1, wherein the substituent is an ether, and wherein the ether substituent has the structure:

-O-X.

6. (Amended) The purine nucleotide [analog] of claim 5, wherein X is an alkyl group.

7. (Amended) The purine nucleotide [analog] of claim 6, wherein X is selected from the group consisting of:

(a) C<sub>7</sub>H<sub>13</sub> (cycloheptyl)

(b) (CH<sub>3</sub>)<sub>3</sub>CCH<sub>2</sub>

(c) CH<sub>3</sub>(CH<sub>2</sub>)<sub>n</sub>, wherein 1 ≤ n ≤ 5

8. (Amended) The purine nucleotide [analog] of claim 1, wherein the substituent is a thioether, and wherein the thioether substituent has the structure:

-S-X.

9. (Amended) The purine nucleotide [analog] of claim 8, wherein X is an alkyl group.

10. (Amended) The purine nucleotide [analog] of claim 9, wherein X is selected from the group consisting of:

- (a)  $C_7H_{13}$  (cycloheptyl)
- (b)  $(CH_3)_3CCH_2$
- (c)  $CH_3(CH_2)_n$ , wherein  $1 \leq n \leq 5$

11. (Amended) The purine nucleotide [analog] of claim 1, wherein the substituent is an amine, and wherein the amine substituent has the structure:

-NH-X.

12. (Amended) The purine nucleotide [analog] of claim 11, wherein X is an alkyl group.

13. (Amended) The purine nucleotide [analog] of claim 12, wherein X is selected from the group consisting of:

- (a)  $C_7H_{13}$  (cycloheptyl)
- (b)  $(CH_3)_3CCH_2$
- (c)  $CH_3(CH_2)_n$ , wherein  $1 \leq n \leq 5$

14. (Amended) The purine nucleotide [analog] of claim 1 selected from the group consisting of:

compound 6a, compound 6b, compound 6c, compound 6d, compound 6e, compound 7a, compound 7b, compound 7c, compound 7d, compound 7e, compound 8a, compound 8b, compound 8c, compound 8d, and compound 8e.

15. (Amended) A method for modulating the activity of an NTPDase enzyme comprising exposing the enzyme to the purine nucleotide [analog] according to claim 1.

17. (Amended) A method for modulating the level in a biological system of:

- (a) a purine nucleotide[(s) and/or];
- (b) a purine nucleoside[(s) and/or];
- (c) a metabolite[(s)] or derivative[(s)] of (a) or (b); or
- (d) any combination thereof [in a biological system],

comprising the step of introducing into said system the purine nucleotide [analog] according to claim 1.

18. (Amended) A method for modulating the activity of a biological process in a biological system, wherein said process is affected by the level in said system of:

(a) a purine nucleotide[(s) and/or];

(b) a purine nucleoside[(s) and/or];

(c) a metabolite[(s)] or derivative[(s)] of (a) or (b); or

(d) any combination thereof [in said system],

comprising the step of introducing into said system the purine nucleotide [analog] according to claim 1.